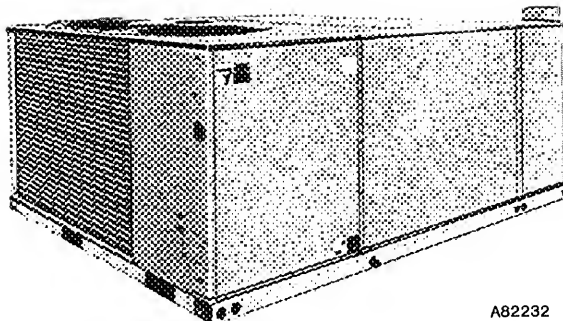
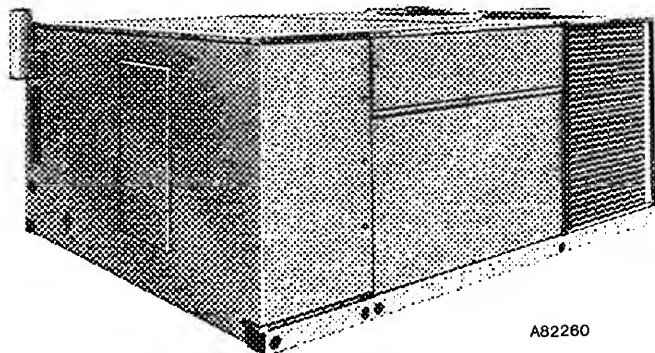


bryant**Bryant**
Air ConditioningIndianapolis, IN
City of Industry, CA**GAS HEATING/
ELECTRIC COOLING
ROOFTOP UNIT****Models 585E
& 579D**
Sizes 090146
& 090203

A82232

Model 585E

A82260

Model 579D

Models 579D and 585E Gas Heating/Electric Cooling Rooftop Units are single-packaged units designed for the commercial market. Both models present a low profile and do not distract from the architecture of the building.

MODEL 585E is designed for horizontal side-by-side duct connections and can be installed at ground level or on a roof. The 585E is ideal for the replacement market.

MODEL 579D has the supply- and return-air openings on the bottom of the unit. The 579D is designed for rooftop installation and mounts on a factory-supplied, roof-mounting curb. The ductwork connects to the curb so that the air ducts and curb can be installed before unit arrival.

FEATURES

FACTORY-ASSEMBLED PACKAGE is a compact, fully self-contained, combination gas heating/electric cooling unit that is prewired, prepiped, and precharged for minimum installation time and expense.

TWO RUGGED, HIGH-EFFICIENCY COMPRESSORS provide two-stage cooling to conserve energy by shutting down one compressor during light cooling loads. These compressors are electrically and mechanically independent; therefore, cooling is still available even if one stage fails.

LOW-PRESSURE PROTECTION is standard.

TWO-STAGE HEATING AND TWO-STAGE COOLING reduces equipment cycling and gives better control of the conditioned space temperature and humidity.

INTERMITTENT SPARK IGNITION that lights pilot only on a "call for heat" by the indoor thermostat. An LP (propane) conversion kit is available for both models.

HIGH-EFFICIENCY, FOUR-PASS HEAT EXCHANGER—The four-pass tubular heat exchanger design provides maximum heat transfer to the heated area.

POSITIVE-PRESSURE COMBUSTION AND MECHANICAL FLUE GAS VENTING are unaffected by adverse wind conditions.

CRANKCASE HEATERS AND FILTER-DRIERS are standard on both models.

WEATHERIZED CABINETS are constructed of heavy-duty, phosphated, zinc-coated steel and finished with corrosion-resistant, modified alkyd, fade-resistant, baked Malibu Beige enamel. Interior surfaces of the evaporator/heat exchanger compartment are insulated to help keep the conditioned air from being affected by the outdoor ambient temperature.

VERTICAL CONDENSER AIR DISCHARGE prevents recirculation of hot condenser air and reduces operating noise level.

COMPRESSOR ISOLATION MOUNTING eliminates vibration (noise) transmission to building structure.

CORROSION-RESISTANT HEAT EXCHANGERS AND BURNERS for longer life.

FURNACE SAFETY CONTROLS shut off gas in event of pilot outage, combustion-air failure, overheating of heat exchangers, or flame rollout.

PROTECTION AS REQUIRED BY N.E.C. for fan motors.

COMPROTEC®—standard on both models, prevents compressor rapid-cycling.

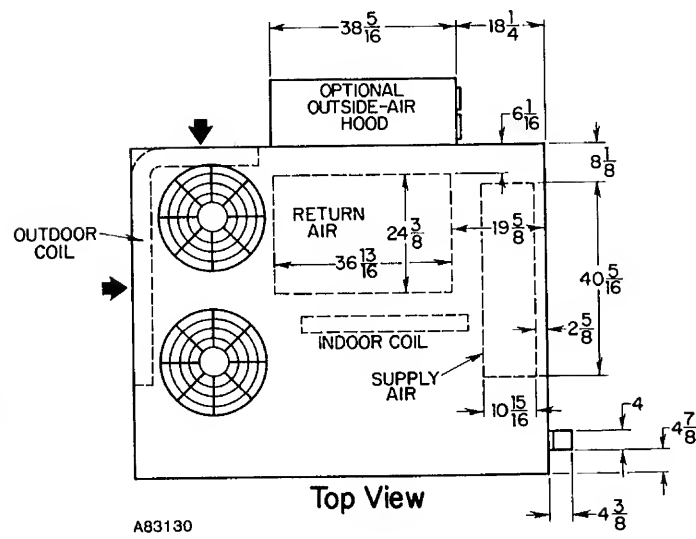
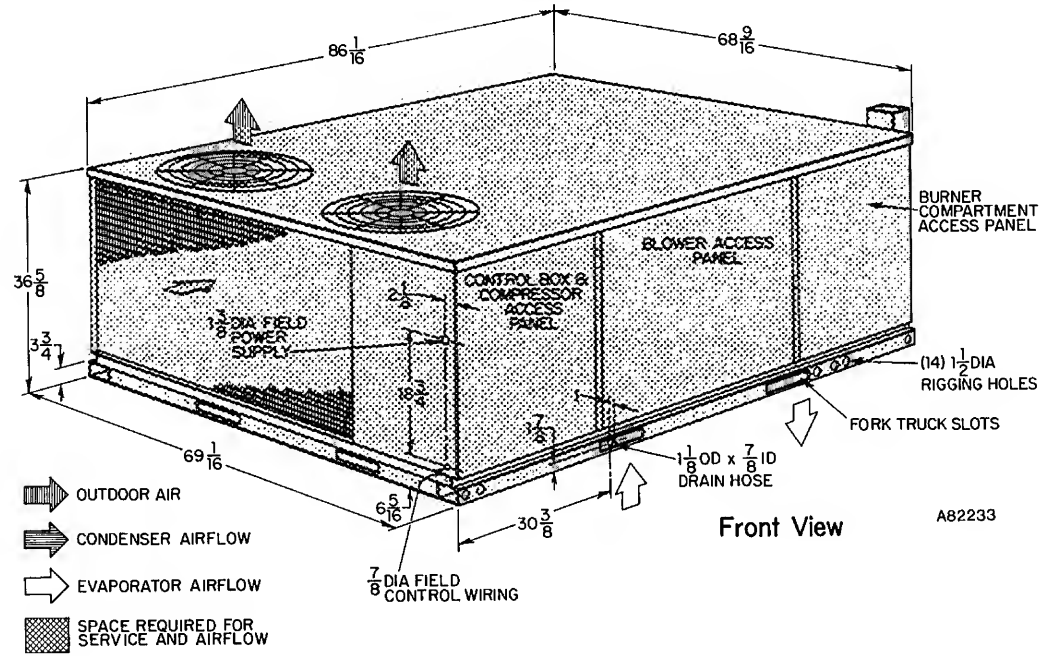
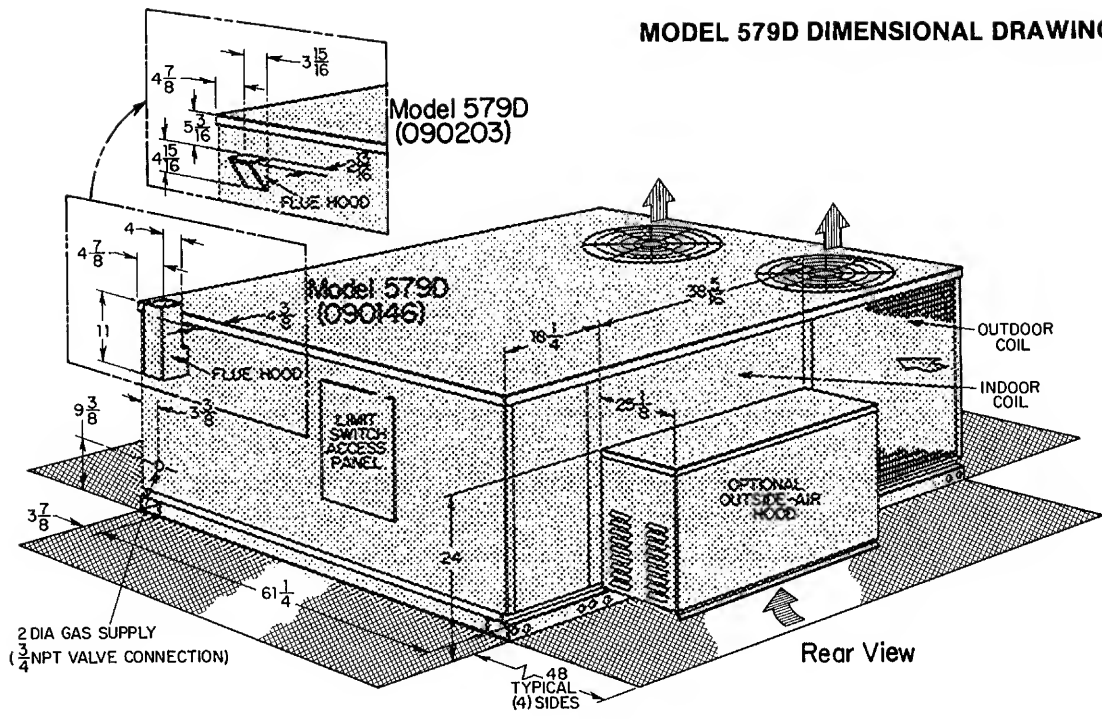
Form No. PDS 585E.90.4B

1. 2



A83047

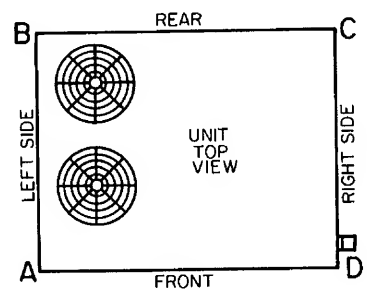
MODEL 579D DIMENSIONAL DRAWING (Inches)



UNIT OPERATING AND CORNER WEIGHTS

Operating Weight	Corner Weights			
	A	B	C	D
1180*	367	244	228	341

*Add 60 pounds to unit if equipped with modulating economizer



A83130

A83000

SPECIFICATIONS

MODEL	585EP090146	585EE090146	579DP090146	579DE090146
SERIES	C	C	C	C
RATINGS & PERFORMANCE				
Cooling				
Total Capacity (Btuh)*	92,000		92,000	
Capacity Reduction	50%		50%	
Rated Airflow (Ft³/Min)*	3000		3000	
Rated ESP (In. wc)*	0.25		0.25	
EER	8.2		8.2	
ARI Noise Rating†	9.0		9.0	
Heating				
1st-Stage Input (Btuh)	86,000		86,000	
1st-Stage Output (Btuh)	63,600		63,600	
1st- & 2nd-Stage Input (Btuh)	146,000		146,000	
1st- & 2nd-Stage Output (Btuh)	116,800		116,800	
Temperature Rise Range (°F)	20–50		20–50	
Thermal Efficiency (%)	80		80	
Certified ESP (In. wc)	1.1		1.1	
ELECTRICAL				
Unit Volts—Phase (60 Hz)	208/230—3	460—3	208/230—3	460—3
Operating Voltage Range	187—253	414—506	187—253	414—506
Unit Full Load Amps	42.7	20.7	42.7	20.7
Min Ampacity for Wire Sizing	48	23	48	23
Min Wire Size (75 °C Copper)‡	6	10	6	10
Max Wire Length (Ft)‡	140	255	140	255
Max Fuse Size (Amps)	60	25	60	25
Control Transformer, 24-V (VA)	75	75	75	75
COMPRESSOR, REFRIGERANT, & CONTROLS				
Compressor No. 1 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor No. 2 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor Protection	Internal Linebreak		Internal Linebreak	
Low-Pressure Switch (PSIG)	Cutout 27, Reset 67		Cutout 27, Reset 67	
Low-Ambient Operation (°F)	45		45	
Refrigerant Charge				
Compressor No. 1 Circuit	6 lbs 3 oz		6 lbs 3 oz	
Compressor No. 2 Circuit	6 lbs 3 oz		6 lbs 3 oz	
INDOOR COIL				
Rows & Fins per Inch	3 & 15		3 & 15	
Coil Face Area (Sq Ft)	7.9		7.9	
Refrigerant Metering Device	Capillary Tubes		Capillary Tubes	
INDOOR BLOWER & MOTOR				
Wheel Dia & Width (In.)	12 x 12		12 x 12	
Blower Pulley Pitch Dia & Bore (In.)	5 & 3/4		5 & 3/4	
Factory-Supplied Filters (In.)	None		(2) 16 x 20 x 2, (2) 20 x 20 x 2	
Required Filter Area (Sq In.)**				
Disposable Type	1152		—	
Cleanable- or High-Capacity Type	936		—	
Blower Motor HP & SF	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3
Speed (Nominal RPM)	1725	1725	1725	1725
Full Load Amps	6.5	3.3	6.5	3.3
Motor Pulley Pitch Dia & Bore (In.)	2.4—3.4 & 5/8		2.4—3.4 & 5/8	
Belt Length & Width (In.)	46 Pitch Length & 1/2		46 Pitch Length & 1/2	
OUTDOOR COIL				
Rows & Fins per Inch	2 & 14		2 & 14	
Coil Face Area (Sq Ft)	15.6		15.6	
OUTDOOR FAN & MOTOR				
Outdoor Fans, No.—Dia	2—22	2—22	2—22	2—22
Motor HP	1/2	1/2	1/2	1/2
Type—Speed	PSC—1075	PSC—1075	PSC—1075	PSC—1075
Full Load Amps	2.9 Each	1.5 Each	2.9 Each	1.5 Each
GAS CONTROLS & GENERAL DATA				
Burners (No.—Type)	4—Inshot		4—Inshot	
Burner Orifices (No.—Drill Size), Natural	4—33		4—33	
Burner Orifices (No.—Drill Size), Propane	4—50		4—50	
Main Gas Valve	24-V Redundant		24-V Redundant	
Pilot (Non-100%)	Crossover Tube		Crossover Tube	
Pilot Ignition	Spark		Spark	
High Limit	Cutout 110, Reset 90		Cutout 110, Reset 90	
Flame Rollout	Manual Reset		Manual Reset	
Fan Control	Delay Relay		Delay Relay	
Manual Shutoff	Part of Gas Valve		Part of Gas Valve	

*Rated in accordance with ARI Standard 210-81

†Rated in accordance with ARI Standard 270-82

‡If other than 75 °C copper wire is used, determine size from unit ampacity and the National Electrical Code. Voltage drop of wire must be less than 2% of unit rated voltage. Maximum wire length shown is for one way along the wire path from unit to electrical service panel

**Model 585E only. Model 579D is equipped with two 20- x 20- x 2-inch and two 16- x 20- x 2-inch filters



SPECIFICATIONS

MODEL	585EP090203	585EE090203	579DP090203	579DE090203
SERIES	C	C	C	C
RATINGS & PERFORMANCE				
Cooling				
Total Capacity (Btuh)*	92,000		92,000	
Capacity Reduction	50%		50%	
Rated Airflow (Ft ³ /Min)*	3000		3000	
Rated ESP (In. wc)*	0.25		0.25	
EER	8.2		8.2	
ARI Noise Rating†	9.0		9.0	
Heating				
1st-Stage Input (Btuh)	125,000		125,000	
1st-Stage Output (Btuh)	92,500		92,500	
1st- & 2nd-Stage Input (Btuh)	203,000		203,000	
1st- & 2nd-Stage Output (Btuh)	160,370		160,370	
Temperature Rise Range (°F)	35–65		35–65	
Thermal Efficiency (%)	79		79	
Certified ESP (In. wc)	1.1		1.1	
ELECTRICAL				
Unit Volts—Phase (60 Hz)	208/230—3	460—3	208/230—3	460—3
Operating Voltage Range	187—253	414—506	187—253	414—506
Unit Full Load Amps	42.7	20.7	42.7	20.7
Min Ampacity for Wire Sizing	48	23	48	23
Min Wire Size (75° C Copper)‡	6	10	6	10
Max Wire Length (Ft)‡	140	255	140	255
Max Fuse Size (Amps)	60	25	60	25
Control Transformer, 24-V (VA)	75	75	75	75
COMPRESSOR, REFRIGERANT, & CONTROLS				
Compressor No. 1 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor No. 2 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor Protection	Internal Linebreak		Internal Linebreak	
Low-Pressure Switch (PSIG)	Cutout 27, Reset 67		Cutout 27, Reset 67	
Low-Ambient Operation (°F)	45		45	
Refrigerant Charge				
Compressor No. 1 Circuit	6 lbs 3 oz		6 lbs 3 oz	
Compressor No. 2 Circuit	6 lbs 3 oz		6 lbs 3 oz	
INDOOR COIL				
Rows & Fins per Inch	3 & 15		3 & 15	
Coil Face Area (Sq Ft)	7.9		7.9	
Refrigerant Metering Device	Capillary Tubes		Capillary Tubes	
INDOOR BLOWER & MOTOR				
Wheel Dia & Width (In.)	12 x 12		12 x 12	
Blower Pulley Pitch Dia & Bore (In.)	5 & 3/4		5 & 3/4	
Factory-Supplied Filters (In.)	None		(2) 16 x 20 x 2, (2) 20 x 20 x 2	
Required Filter Area (Sq In)**				
Disposable Type	1152		—	
Cleanable- or High-Capacity Type	936		—	
Blower Motor HP & SF	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3
Speed (Nominal RPM)	1725	1725	1725	1725
Full Load Amps	6.5	3.3	6.5	3.3
Motor Pulley Pitch Dia & Bore (In.)	2.4—3.4 & 5/8		2.4—3.4 & 5/8	
Belt Length & Width (In.)	46 Pitch Length & 1/2		46 Pitch Length & 1/2	
OUTDOOR COIL				
Rows & Fins per Inch	2 & 14		2 & 14	
Coil Face Area (Sq Ft)	15.6		15.6	
OUTDOOR FAN & MOTOR				
Outdoor Fans, No.—Dia	2—22	2—22	2—22	2—22
Motor HP	1/2	1/2	1/2	1/2
Type—Speed	PSC—1075	PSC—1075	PSC—1075	PSC—1075
Full Load Amps	2.9 Each	1.5 Each	2.9 Each	1.5 Each
GAS CONTROLS & GENERAL DATA				
Burners (No.—Type)	4—Inshot		4—Inshot	
Burner Orifices (No.—Drill Size), Natural	4—29		4—29	
Burner Orifices (No.—Drill Size), Propane	4—45		4—45	
Main Gas Valve	24-V Redundant		24-V Redundant	
Pilot (Non-100%)	Crossover Tube		Crossover Tube	
Pilot Ignition	Spark		Spark	
High Limit	Cutout 170, Reset 140		Cutout 170, Reset 140	
Flame Rollout	Manual Reset		Manual Reset	
Fan Control	Delay Relay		Delay Relay	
Manual Shutoff	Part of Gas Valve		Part of Gas Valve	

*Rated in accordance with ARI Standard 210-81

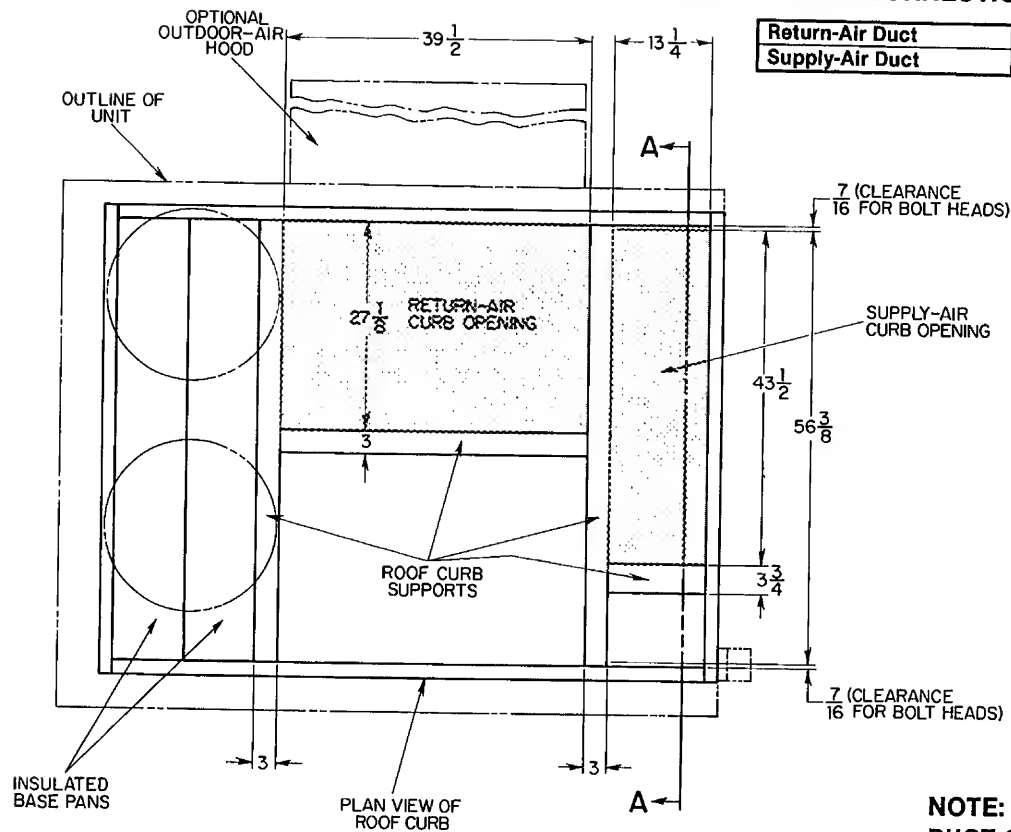
†Rated in accordance with ARI Standard 270-82

‡If other than 75°C copper wire is used, determine size from unit ampacity and the National Electrical Code. Voltage drop of wire must be less than 2% of unit rated voltage. Maximum wire length shown is for one way along the wire path from unit to electrical service panel.

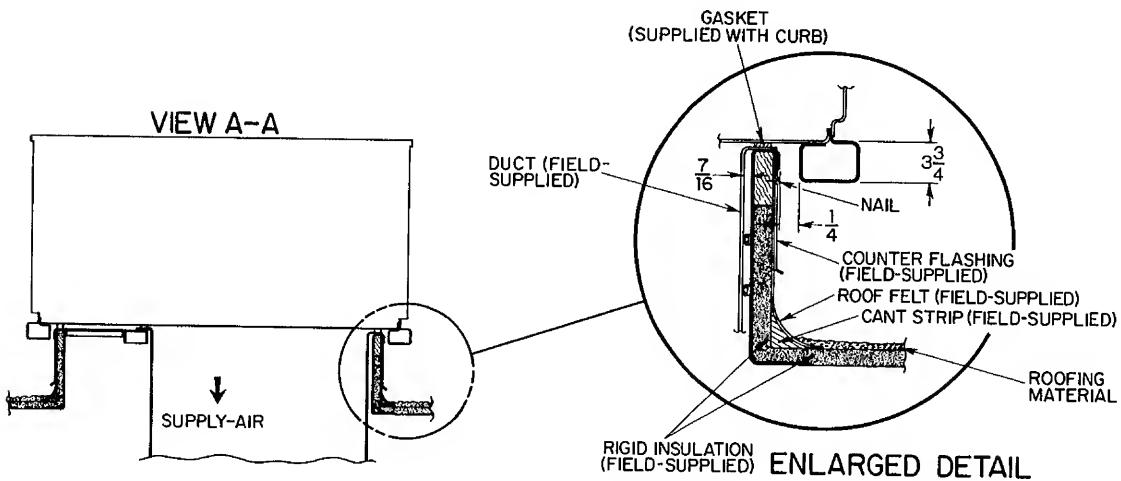
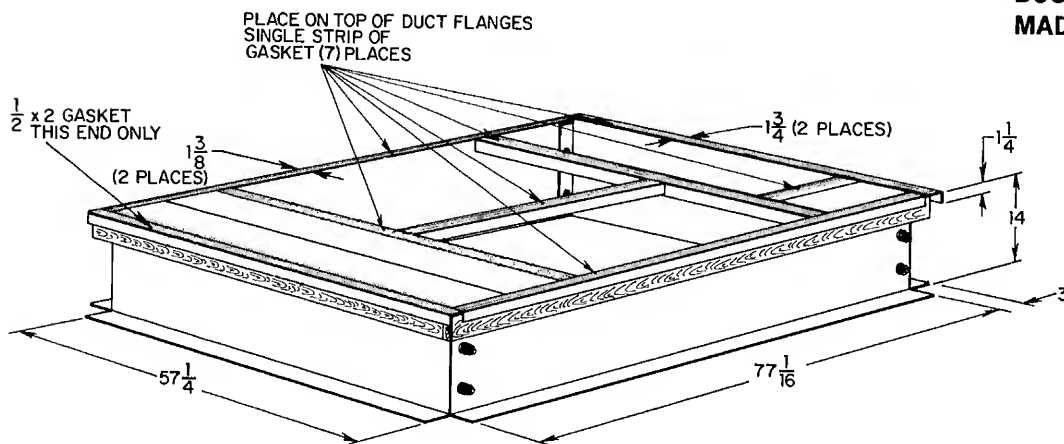
**Model 585E only. Model 579D is equipped with two 20- x 20- x 2-inch and two 16- x 20- x 2-inch filters.

DUCT CONNECTION SIZES TO CURB

Return-Air Duct	39-1/2 x 27-1/8
Supply-Air Duct	43-1/2 x 13-1/4



NOTE:
DUCT CONNECTIONS ARE
MADE TO CURB ONLY.



MODEL 579D ROOF-MOUNTING CURB P/N 307175-106

DETAILED NET COOLING CAPACITIES

Evaporator Air		CONDENSOR AIR TEMPERATURE (°F)																							
		85						95						105						115					
		Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW				
FT per Min	°F WB	Total	Sens				Total	Sens				Total	Sens				Total	Sens				Total	Sens		
MODELS 585E & 579D																									
2350	71	96.8	50.4	60.2	58.7	10.3	95.4	50.3	60.3	58.9	11.1	91.0	48.8	60.9	59.5	11.7	80.9	45.1	62.3	61.0	12.4				
	67	93.2	62.1	55.6	54.0	10.2	89.2	60.9	56.1	54.6	10.8	80.0	57.1	57.6	56.0	11.4	69.5	52.9	59.3	57.6	12.0				
	63	87.2	72.7	51.5	49.7	10.0	79.0	69.0	52.9	51.1	10.6	69.0	64.3	54.8	52.7	11.2	58.8	58.7	57.0	54.4	11.8				
2500	71	97.4	51.3	61.1	59.5	10.4	96.2	51.4	61.1	59.6	11.2	91.9	50.0	61.6	60.2	11.8	81.8	46.3	62.9	61.5	12.5				
	67	93.5	63.4	56.6	54.8	10.3	90.2	62.6	56.9	55.3	10.9	81.2	59.0	58.2	56.6	11.5	70.5	54.8	59.8	58.1	12.1				
	63	88.0	74.9	52.4	50.4	10.1	80.4	71.5	53.6	51.6	10.7	70.3	66.7	55.4	53.2	11.3	60.3	60.3	57.8	54.7	11.9				
2750	71	97.2	52.1	62.5	60.7	10.5	97.2	53.0	62.2	60.7	11.3	93.1	51.8	62.6	61.2	12.0	83.5	48.5	63.8	62.3	12.6				
	67	94.0	65.5	58.0	56.0	10.4	91.2	65.3	58.1	56.3	11.1	83.0	62.1	59.2	57.4	11.7	72.1	57.9	60.6	58.8	12.3				
	63	89.2	78.3	53.8	51.5	10.2	82.6	75.5	54.7	52.5	10.8	72.5	70.4	56.4	53.9	11.4	64.0	64.0	58.6	55.0	12.1				
3000	71	98.1	53.5	63.6	61.5	10.7	97.0	54.1	63.4	61.6	11.4	94.0	53.6	63.5	62.0	12.2	84.8	50.5	64.5	62.9	12.8				
	67	95.1	68.1	59.1	56.9	10.6	92.0	67.8	59.2	57.2	11.2	84.6	65.2	60.0	58.1	11.8	73.5	60.9	61.3	59.3	12.4				
	63	90.3	81.5	55.0	52.4	10.4	84.5	79.2	55.7	53.2	11.0	74.4	73.6	57.4	54.5	11.6	67.4	67.4	59.3	55.3	12.2				
3250	71	98.9	55.0	64.4	62.2	10.8	97.5	55.6	64.2	62.4	11.6	94.4	55.1	64.4	62.7	12.3	86.2	52.5	65.1	63.5	12.9				
	67	95.1	69.8	60.2	57.7	10.6	92.8	70.3	60.1	58.0	11.4	86.0	68.1	60.7	58.7	12.0	74.9	63.7	61.9	59.8	12.6				
	63	91.1	84.4	56.1	53.2	10.5	86.2	82.7	56.6	53.8	11.2	76.3	76.3	58.4	54.9	11.8	69.0	69.0	60.4	55.8	12.4				
3500	71	98.2	55.4	65.4	63.0	10.9	97.9	56.9	65.0	63.0	11.7	94.4	56.4	65.1	63.3	12.4	87.3	54.5	65.7	63.9	13.1				
	67	95.9	72.2	61.0	58.4	10.8	93.4	72.8	60.8	58.6	11.5	87.1	70.9	61.3	59.2	12.1	76.1	66.4	62.5	60.3	12.7				
	63	91.8	87.0	57.1	53.9	10.7	88.0	85.9	57.4	54.3	11.3	78.6	78.6	59.3	55.3	12.0	70.8	70.8	61.3	56.1	12.6				

NOTES:

- Sensible heat capacities shown are based on 80°F entering air at the indoor coil
- Direct interpolation is permissible Do not extrapolate

3 To interpolate:

- below 80°F DB**, subtract 805 Btuh per 1000 Ft³/Min for each degree below 80°F from the listed sensible capacity
- above 80°F DB**, add 804 Btuh per 1000 Ft³/Min for each degree above 80°F to the listed sensible capacity

MODEL 585E AIR DELIVERY AT INDICATED E.S.P. (In. wc)—WITH WET COIL AND NO AIR FILTERS

Airflow (Ft ³ /Min)	1.5-HP Motor, 1.3 Service Factor, 1.95 Max BHP, 850—1200-RPM Drive Range																			
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2350	700	0.62	735	0.71	765	0.77	795	0.81	820	0.84	850	0.90	885	0.96	920	1.01	940	1.05	970	1.11
2500	730	0.76	755	0.80	785	0.84	810	0.88	840	0.93	870	0.99	905	1.02	935	1.09	970	1.16	1005	1.23
2750	780	0.90	805	0.94	830	0.98	860	1.03	890	1.08	920	1.12	950	1.19	985	1.26	1020	1.32	1035	1.50
3000	830	1.08	865	1.13	885	1.17	920	1.22	945	1.27	960	1.41	988	1.56	1025	1.67	1050	1.73	1075	1.82
3250	885	1.27	905	1.51	940	1.58	970	1.70	1005	1.81	1030	1.87	1060	1.94	---	---	---	---	---	---
3500	935	1.71	970	1.82	1010	1.89	---	---	---	---	---	---	---	---	---	---	---	---	---	---

E.S.P. = External Static Pressure RPM = Blower fan revolutions per minute BHP = Brake horsepower

- Shaded portions of table are beyond standard drive range or motor horsepower at rated voltage.
- See "Motor Pulley Settings" table for pulley setting to obtain required blower fan RPM for desired airflow
- Pressure drop of field-supplied filters must be included in duct system external static pressure

MODEL 579D AIR DELIVERY AT INDICATED E.S.P. (In. wc)—WITH WET COIL AND STANDARD AIR FILTERS

Airflow (Ft ³ /Min)	1.5-HP Motor, 1.3 Service Factor, 1.95 Max BHP, 850—1200-RPM Drive Range																			
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2350	710	0.69	750	0.73	780	0.80	810	0.84	835	0.89	865	0.93	895	0.98	935	1.03	950	1.08	985	1.15
2500	745	0.78	770	0.83	800	0.87	825	0.92	855	0.97	885	1.00	920	1.05	950	1.11	985	1.18	1020	1.25
2750	795	0.93	820	0.97	845	1.01	880	1.07	910	1.11	940	1.17	970	1.24	1005	1.31	1035	1.38	1040	1.57
3000	850	1.11	885	1.17	910	1.24	935	1.30	960	1.50	990	1.58	1015	1.64	1047	1.74	1075	1.82	1080	1.91
3250	910	1.50	940	1.60	970	1.68	995	1.70	1025	1.85	1060	1.95	—	—	—	—	—	—	—	—
3500	935	1.71	970	1.82	1010	1.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—

E.S.P. = External Static Pressure. RPM = Blower fan revolutions per minute BHP = Brake horsepower

- Shaded portions of table are beyond standard drive range or motor horsepower at rated voltage
- See "Motor Pulley Settings" table for pulley setting to obtain required blower fan RPM for desired airflow
- See "Accessories Pressure Drops" table for economizer and wet coil pressure drops

ACCESSORIES & OPTIONAL EQUIPMENT

Used With Model	Kit Description	Kit P/N
579D	Roof Mounting Curb	307175-106
579D	Manual Outside-Air Damper*	307178-101
579D	Two-Position Damper Motor†	307180-101
579D	Modulating Economizer‡	307182-101
579D & 585E	LP-Conversion Kit (090203)	307188-102
579D & 585E	LP-Conversion Kit (090146)	307188-101

*Provides up to 35% outside air

†For use with manual outside-air damper

‡Includes rain hood and relief-air damper.

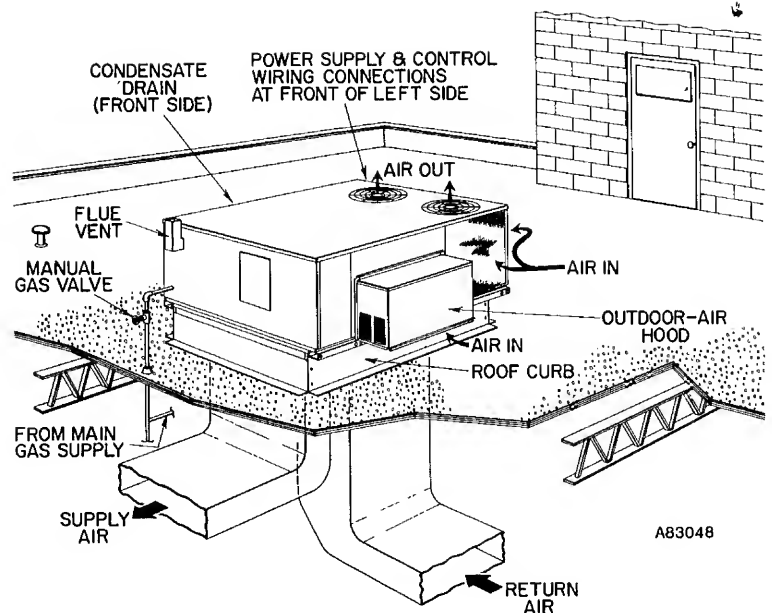
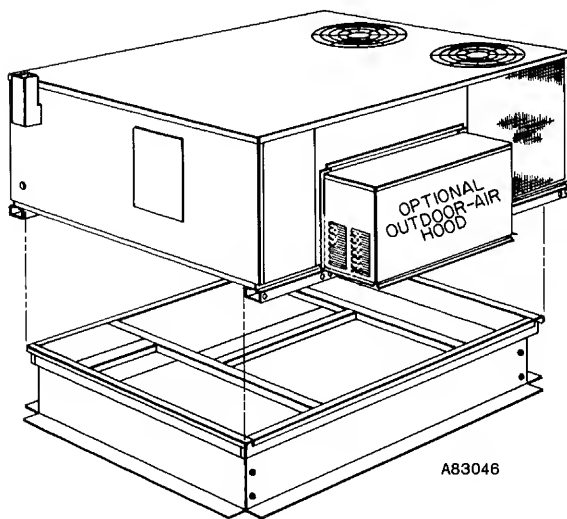
ACCESSORIES PRESSURE DROPS

Airflow (Ft ³ /Min)	Economizer PD (In. wc)	Wet Coil PD (In. wc)
2350	0.012	0.038
2500	0.014	0.042
2750	0.018	0.052
3000	0.020	0.062
3250	0.024	0.072
3500	0.028	0.082

FAN RPM AT MOTOR PULLEY SETTINGS

Motor Pulley Turns Open	Blower Fan RPM
0	1200
1/2	1165
1	1130
1-1/2	1095
2	1060
2-1/2	1025
3	990
3-1/2	955
4	920
4-1/2	885
5	850

MODEL 579D—TYPICAL APPLICATION



ENGINEER'S SPECIFICATION GUIDE

GENERAL: Furnish and install a self-contained electric cooling/gas heating Model 585E Rooftop Unit with horizontal supply- and return-air connections, or install a Model 579D mounted on a full perimeter factory-supplied curb with supply- and return-air ducts connected within the curb. Holes shall be provided in unit baserails for rigging and lifting operations. Units shall be shipped fully charged with oil and R-22 refrigerant. Unit design shall be A.G.A. certified and labeled accordingly.

COOLING CAPACITY: Total net cooling capacity of the unit shall be _____ Btuh or greater, and sensible capacity shall be _____ Btuh or greater at conditions of _____ Ft³/Min evaporator air entering unit at _____ °F dry bulb, _____ °F wet bulb and condenser entering air of _____ °F dry bulb. Total power consumption shall not exceed _____ KWH. The EER at design conditions shall be a minimum of _____ Btuh/watt. The unit shall be capable of cooling operation down to 45°F. Two-stage cooling shall be provided.

HEATING CAPACITY: Total heating capacity of the unit shall be _____ Btuh maximum input. First-stage heating input shall be _____ Btuh.

CABINET: The cabinet shall be constructed of heavy-gauge zinc-coated galvanized steel with Malibu Beige baked enamel finish. Unit shall be capable of firing natural (propane) gas as certified by A.G.A.

COMPRESSORS: Both compressors shall be of the welded, fully hermetic type with crankcase heaters and suitable vibration isolators. A separate refrigerant circuit shall be provided for each compressor.

CONDENSER SECTION: The condenser coil shall be constructed of aluminum plate fins mechanically bonded to seamless copper tubes. The condenser fans shall be direct-driven propeller type and mounted for vertical air discharge.

EVAPORATOR SECTION: The evaporator coil shall be constructed of aluminum plate fins mechanically bonded to seamless copper tubes. The evaporator fan shall be of the forward curved centrifugal type, belt driven. Adjustment of airflow shall be accomplished by means of an adjustable pitch pulley.

GAS HEATING SECTION: The unit shall be equipped with an aluminized steel, 4-pass tubular heat exchanger. Gas controls shall include a two-stage redundant gas valve/regulator, an intermittent pilot ignition system, high-limit switch, and a time-delay heating relay. Combustion air shall be induced by a power venting fan capable of handling 100% of flue gas products. The power venter shall include a centrifugal end switch to prove operation of the power venter fan before allowing ignition.

CONTROL CIRCUIT: The unit control panel shall be prewired in the unit casing—furnished with a 24-V control transformer, low-pressure switches, compressor, condenser, and evaporator fan motor contactors, as well as other protective devices.

ADDITIONAL EQUIPMENT (MODEL 579D): A full roof curb shall be provided. Curb design shall provide for connection of ductwork to the curb before unit placement.

A manual outside-air damper, complete with birdscreen, shall be furnished for field attachment.

An economizer control shall be factory-assembled and installed in the unit. The economizer control shall maintain a fixed supply-air temperature during the "free" cooling operation by providing for full modulation of the operable outside- and return-air dampers. The package shall be complete with necessary dampers, linkage, and spring-return modulating damper motor. The economizer controls shall include an enthalpy control capable of controlling the dampers by measuring the heat content of the outside air.

APPROVALS: The unit shall be A.G.A. certified as an electric cooling/gas heating outdoor unit. All wiring shall be in compliance with N.E.C. The unit shall be certified by ARI for cooling capacity and noise ratings.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

PRINTED IN U.S.A. 7/84

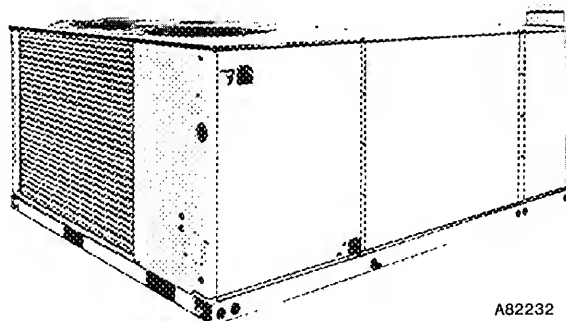
day & night

Day&Night
Air Conditioning

Indianapolis, IN
City of Industry, CA

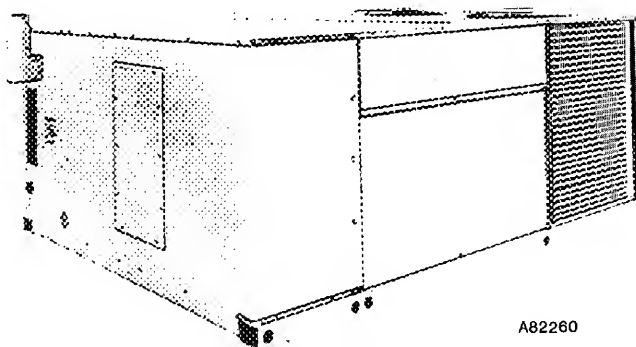
GAS HEATING/ ELECTRIC COOLING ROOFTOP UNIT

**Models 585E
& 579D**
Sizes 090146
& 090203



A82232

Model 585E



A82260

Model 579D

Models 579D and 585E Gas Heating/Electric Cooling Rooftop Units are single-packaged units designed for the commercial market. Both models present a low profile and do not distract from the architecture of the building.

MODEL 585E is designed for horizontal side-by-side duct connections and can be installed at ground level or on a roof. The 585E is ideal for the replacement market.

MODEL 579D has the supply- and return-air openings on the bottom of the unit. The 579D is designed for rooftop installation and mounts on a factory-supplied, roof-mounting curb. The ductwork connects to the curb so that the air ducts and curb can be installed before unit arrival.

FEATURES

FACTORY-ASSEMBLED PACKAGE is a compact, fully self-contained, combination gas heating/electric cooling unit that is prewired, prepiped, and precharged for minimum installation time and expense.

TWO RUGGED, HIGH-EFFICIENCY COMPRESSORS provide two-stage cooling to conserve energy by shutting down one compressor during light cooling loads. These compressors are electrically and mechanically independent; therefore, cooling is still available even if one stage fails.

LOW-PRESSURE PROTECTION is standard.

TWO-STAGE HEATING AND TWO-STAGE COOLING reduces equipment cycling and gives better control of the conditioned space temperature and humidity.

INTERMITTENT SPARK IGNITION that lights pilot only on a "call for heat" by the indoor thermostat. An LP (propane) conversion kit is available for both models.

HIGH-EFFICIENCY, FOUR-PASS HEAT EXCHANGER—The four-pass tubular heat exchanger design provides maximum heat transfer to the heated area.

POSITIVE-PRESSURE COMBUSTION AND MECHANICAL FLUE GAS VENTING are unaffected by adverse wind conditions.

CRANKCASE HEATERS AND FILTER-DRIERS are standard on both models.

WEATHERIZED CABINETS are constructed of heavy-duty, phosphated, zinc-coated steel and finished with corrosion-resistant, modified alkyd, fade-resistant, baked Malibu Beige enamel. Interior surfaces of the evaporator/heat exchanger compartment are insulated to help keep the conditioned air from being affected by the outdoor ambient temperature.

VERTICAL CONDENSER AIR DISCHARGE prevents recirculation of hot condenser air and reduces operating noise level.

COMPRESSOR ISOLATION MOUNTING eliminates vibration (noise) transmission to building structure.

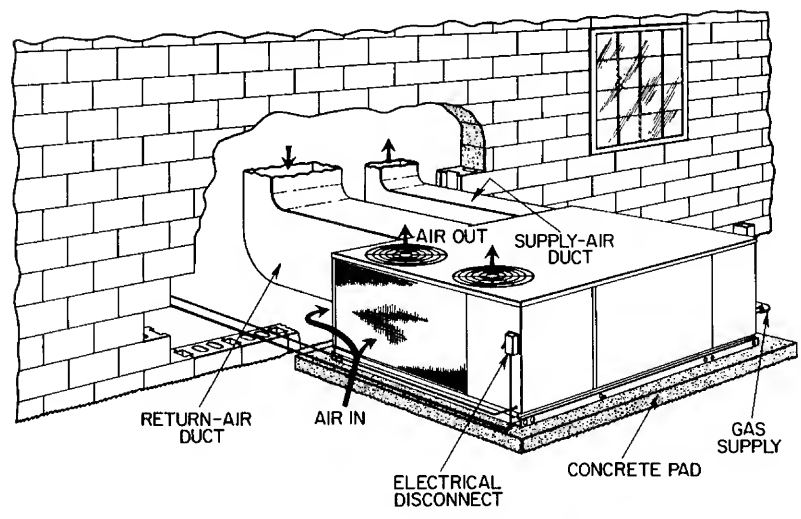
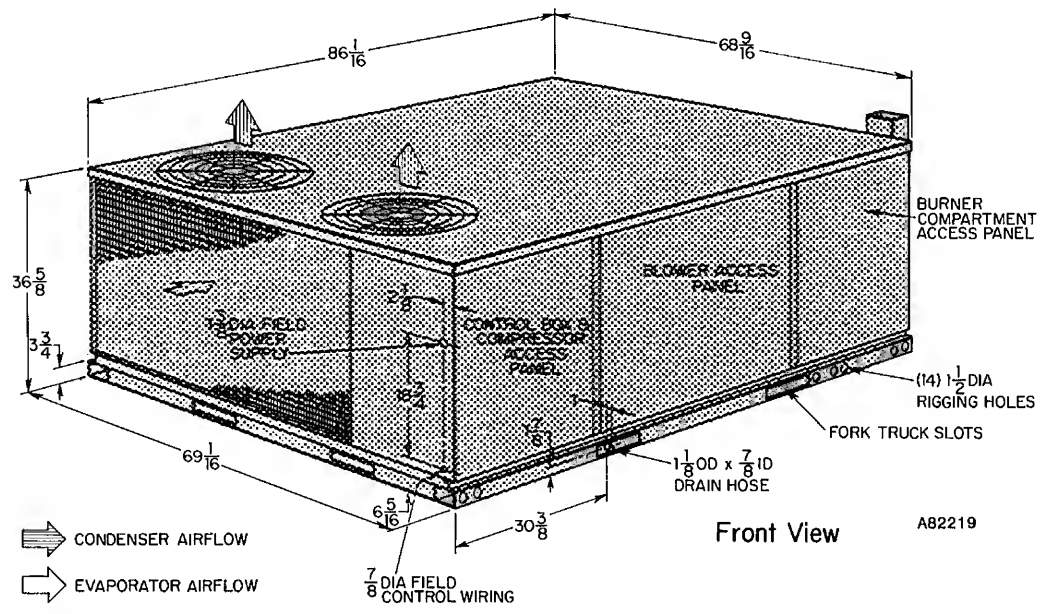
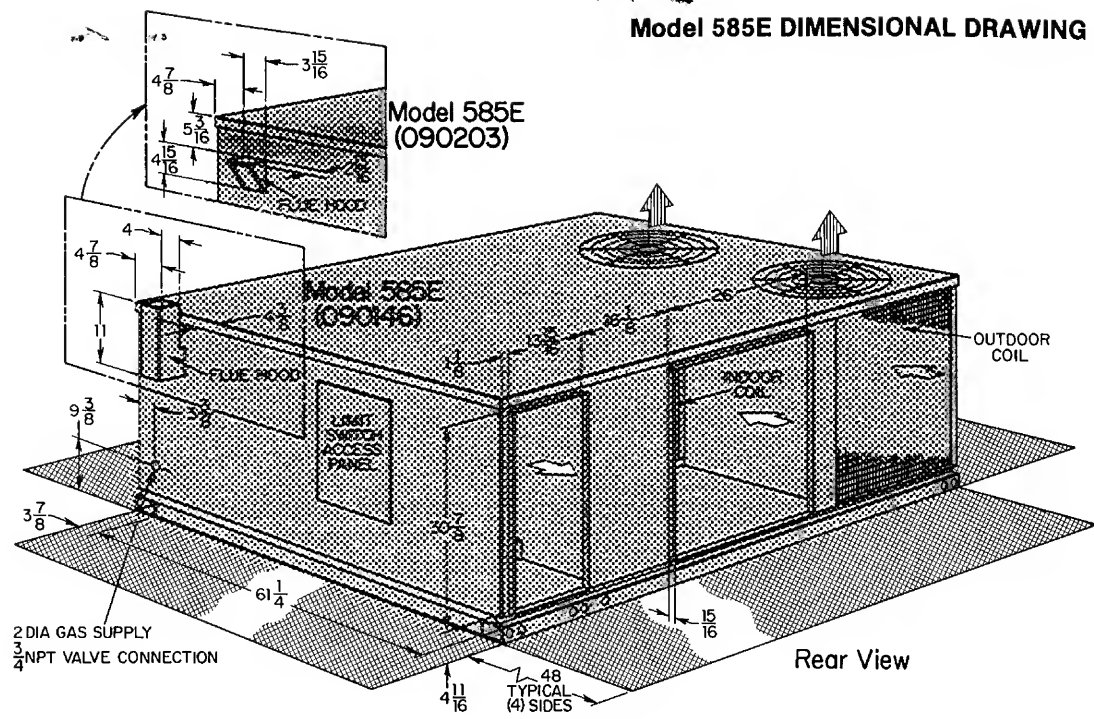
CORROSION-RESISTANT HEAT EXCHANGERS AND BURNERS for longer life.

FURNACE SAFETY CONTROLS shut off gas in event of pilot outage, combustion-air failure, overheating of heat exchangers, or flame rollout.

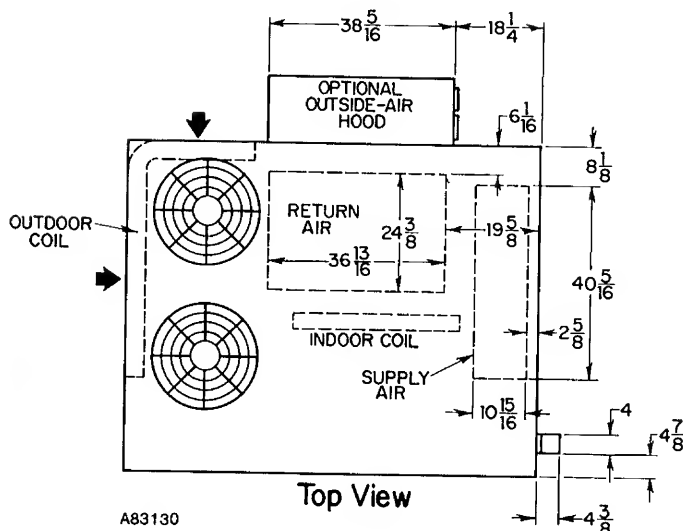
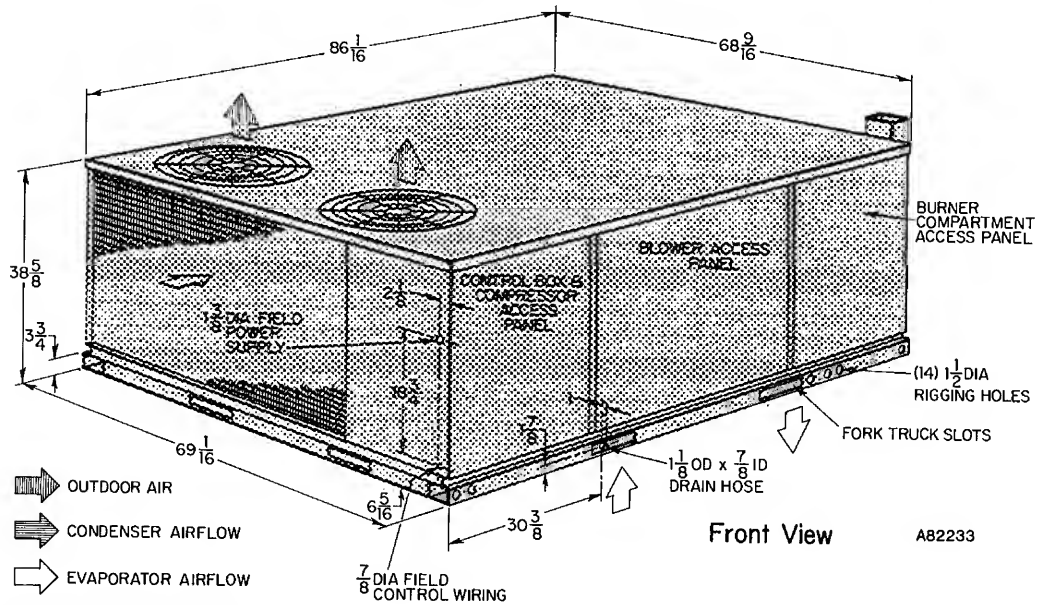
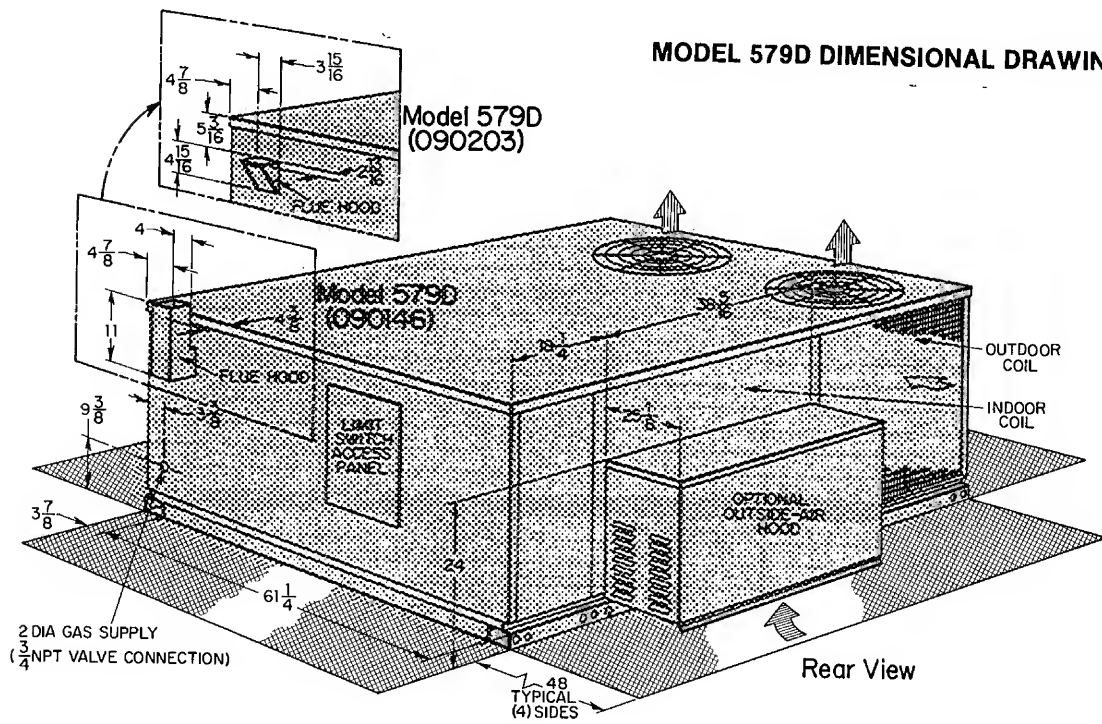
PROTECTION AS REQUIRED BY N.E.C. for fan motors.

COMPROTEC®—standard on both models, prevents compressor rapid-cycling.

Model 585E DIMENSIONAL DRAWING (Inches)



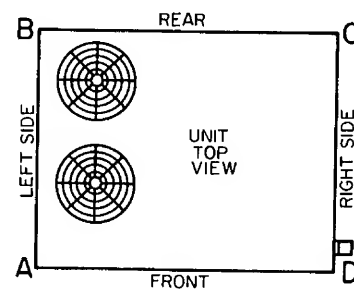
MODEL 579D DIMENSIONAL DRAWING (Inches)



UNIT OPERATING AND CORNER WEIGHTS

Operating Weight	Corner Weights			
	A	B	C	D
1180*	367	244	228	341

*Add 60 pounds to unit if equipped with modulating economizer



A83000

SPECIFICATIONS

MODEL	585EP090146	585EE090146	579DP090146	579DE090146
SERIES	C	C	C	C
RATINGS & PERFORMANCE				
Cooling				
Total Capacity (Btuh)*	92,000		92,000	
Capacity Reduction	50%		50%	
Rated Airflow (Ft ³ /Min)*	3000		3000	
Rated ESP (In. wc)*	0.25		0.25	
EER	8.2		8.2	
ARI Noise Rating†	9.0		9.0	
Heating				
1st-Stage Input (Btuh)	86,000		86,000	
1st-Stage Output (Btuh)	63,600		63,600	
1st- & 2nd-Stage Input (Btuh)	146,000		146,000	
1st- & 2nd Stage Output (Btuh)	116,800		116,800	
Temperature Rise Range (°F)	20–50		20–50	
Thermal Efficiency (%)	80		80	
Certified ESP (In. wc)	1.1		1.1	
ELECTRICAL				
Unit Volts—Phase (60 Hz)	208/230–3	460–3	208/230–3	460–3
Operating Voltage Range	187–253	414–506	187–253	414–506
Unit Full Load Amps	42.7	20.7	42.7	20.7
Min Ampacity for Wire Sizing	48	23	48	23
Min Wire Size (75°C Copper)‡	6	10	6	10
Max Wire Length (Ft)‡	140	255	140	255
Max Fuse Size (Amps)	60	25	60	25
Control Transformer, 24-V (VA)	75	75	75	75
COMPRESSOR, REFRIGERANT, & CONTROLS				
Compressor No. 1 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor No. 2 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor Protection	Internal Linebreak		Internal Linebreak	
Low-Pressure Switch (PSIG)	Cutout 27, Reset 67		Cutout 27, Reset 67	
Low-Ambient Operation (°F)	45		45	
Refrigerant Charge				
Compressor No. 1 Circuit	6 lbs 3 oz		6 lbs 3 oz	
Compressor No. 2 Circuit	6 lbs 3 oz		6 lbs 3 oz	
INDOOR COIL				
Rows & Fins per Inch	3 & 15		3 & 15	
Coil Face Area (Sq Ft)	7.9		7.9	
Refrigerant Metering Device	Capillary Tubes		Capillary Tubes	
INDOOR BLOWER & MOTOR				
Wheel Dia & Width (In.)	12 x 12		12 x 12	
Blower Pulley Pitch Dia & Bore (In.)	5 & 3/4		5 & 3/4	
Factory-Supplied Filters (In.)	None		(2) 16 x 20 x 2, (2) 20 x 20 x 2	
Required Filter Area (Sq In)**				
Disposable Type	1152		—	
Cleanable- or High-Capacity Type	936		—	
Blower Motor HP & SF	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3
Speed (Nominal RPM)	1725	1725	1725	1725
Full Load Amps	6.5	3.3	6.5	3.3
Motor Pulley Pitch Dia & Bore (In.)	2.4–3.4 & 5/8		2.4–3.4 & 5/8	
Belt Length & Width (In.)	46 Pitch Length & 1/2		46 Pitch Length & 1/2	
OUTDOOR COIL				
Rows & Fins per Inch	2 & 14		2 & 14	
Coil Face Area (Sq Ft)	15.6		15.6	
OUTDOOR FAN & MOTOR				
Outdoor Fans, No.—Dia	2–22	2–22	2–22	2–22
Motor HP	1/2	1/2	1/2	1/2
Type—Speed	PSC—1075	PSC—1075	PSC—1075	PSC—1075
Full Load Amps	2.9 Each	1.5 Each	2.9 Each	1.5 Each
GAS CONTROLS & GENERAL DATA				
Burners (No.—Type)	4—Inshot		4—Inshot	
Burner Orifices (No.—Drill Size), Natural	4—33		4—33	
Burner Orifices (No.—Drill Size), Propane	4—50		4—50	
Main Gas Valve	24-V Redundant		24-V Redundant	
Pilot (Non-100%)	Crossover Tube		Crossover Tube	
Pilot Ignition	Spark		Spark	
High Limit	Cutout 110, Reset 90		Cutout 110, Reset 90	
Flame Rollout	Manual Reset		Manual Reset	
Fan Control	Delay Relay		Delay Relay	
Manual Shutoff	Part of Gas Valve		Part of Gas Valve	

*Rated in accordance with ARI Standard 210-81.

†Rated in accordance with ARI Standard 270-82

‡If other than 75°C copper wire is used, determine size from unit ampacity and the National Electrical Code. Voltage drop of wire must be less than 2% of unit rated voltage. Maximum wire length shown is for one way along the wire path from unit to electrical service panel.

**Model 585E only. Model 579D is equipped with two 20- x 20- x 2-inch and two 16- x 20- x 2-inch filters.



SPECIFICATIONS

MODEL	585EP090203	585EE090203	579DP090203	579DE090203
SERIES	C	C	C	C
RATINGS & PERFORMANCE				
Cooling				
Total Capacity (Btuh)*	92,000		92,000	
Capacity Reduction	50%		50%	
Rated Airflow (Ft ³ /Min)*	3000		3000	
Rated ESP (In. wc)*	0.25		0.25	
EER	8.2		8.2	
ARI Noise Rating†	9.0		9.0	
Heating				
1st-Stage Input (Btuh)	125,000		125,000	
1st-Stage Output (Btuh)	92,500		92,500	
1st- & 2nd-Stage Input (Btuh)	203,000		203,000	
1st- & 2nd-Stage Output (Btuh)	160,370		160,370	
Temperature Rise Range (°F)	35–65		35–65	
Thermal Efficiency (%)	79		79	
Certified ESP (In. wc)	1.1		1.1	
ELECTRICAL				
Unit Volts—Phase (60 Hz)	208/230—3	460—3	208/230—3	460—3
Operating Voltage Range	187—253	414—506	187—253	414—506
Unit Full Load Amps	42.7	20.7	42.7	20.7
Min Ampacity for Wire Sizing	48	23	48	23
Min Wire Size (75 °C Copper)‡	6	10	6	10
Max Wire Length (Ft)‡	140	255	140	255
Max Fuse Size (Amps)	60	25	60	25
Control Transformer, 24-V (VA)	75	75	75	75
COMPRESSOR, REFRIGERANT, & CONTROLS				
Compressor No. 1 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor No. 2 (Type—RPM)	Hermetic—3500	Hermetic—3500	Hermetic—3500	Hermetic—3500
Rated Load Amps	15.2	7.2	15.2	7.2
Locked Rotor Amps	80	35	80	35
Compressor Protection	Internal Linebreak		Internal Linebreak	
Low-Pressure Switch (PSIG)	Cutout 27, Reset 67		Cutout 27, Reset 67	
Low-Ambient Operation (°F)	45		45	
Refrigerant Charge				
Compressor No. 1 Circuit	6 lbs 3 oz		6 lbs 3 oz	
Compressor No. 2 Circuit	6 lbs 3 oz		6 lbs 3 oz	
INDOOR COIL				
Rows & Fins per Inch	3 & 15		3 & 15	
Coil Face Area (Sq Ft)	7.9		7.9	
Refrigerant Metering Device	Capillary Tubes		Capillary Tubes	
INDOOR BLOWER & MOTOR				
Wheel Dia & Width (In.)	12 x 12		12 x 12	
Blower Pulley Pitch Dia & Bore (In.)	5 & 3/4		5 & 3/4	
Factory-Supplied Filters (In.)	None		(2) 16 x 20 x 2, (2) 20 x 20 x 2	
Required Filter Area (Sq In)**				
Disposable Type	1152		—	
Cleanable- or High-Capacity Type	936		—	
Blower Motor HP & SF	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3	1.5 & 1.3
Speed (Nominal RPM)	1725	1725	1725	1725
Full Load Amps	6.5	3.3	6.5	3.3
Motor Pulley Pitch Dia & Bore (In.)	2.4—3.4 & 5/8		2.4—3.4 & 5/8	
Belt Length & Width (In.)	46 Pitch Length & 1/2		46 Pitch Length & 1/2	
OUTDOOR COIL				
Rows & Fins per Inch	2 & 14		2 & 14	
Coil Face Area (Sq Ft)	15.6		15.6	
OUTDOOR FAN & MOTOR				
Outdoor Fans, No.—Dia	2—22	2—22	2—22	2—22
Motor HP	1/2	1/2	1/2	1/2
Type—Speed	PSC—1075	PSC—1075	PSC—1075	PSC—1075
Full Load Amps	2.9 Each	1.5 Each	2.9 Each	1.5 Each
GAS CONTROLS & GENERAL DATA				
Burners (No.—Type)	4—Inshot		4—Inshot	
Burner Orifices (No.—Drill Size), Natural	4—29		4—29	
Burner Orifices (No.—Drill Size), Propane	4—45		4—45	
Main Gas Valve	24-V Redundant		24-V Redundant	
Pilot (Non-100%)	Crossover Tube		Crossover Tube	
Pilot Ignition	Spark		Spark	
High Limit	Cutout 170, Reset 140		Cutout 170, Reset 140	
Flame Rollout	Manual Reset		Manual Reset	
Fan Control	Delay Relay		Delay Relay	
Manual Shutoff	Part of Gas Valve		Part of Gas Valve	

*Rated in accordance with ARI Standard 210-81

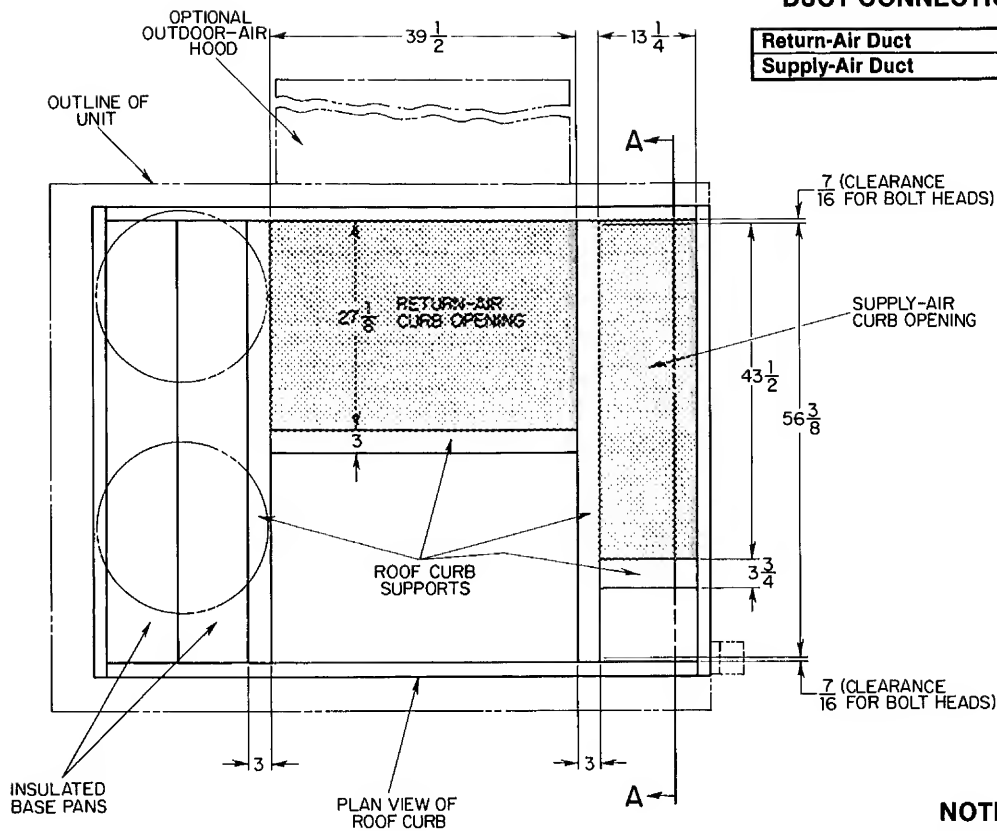
†Rated in accordance with ARI Standard 270-82

‡If other than 75°C copper wire is used, determine size from unit ampacity and the National Electrical Code. Voltage drop of wire must be less than 2% of unit rated voltage. Maximum wire length shown is for one way along the wire path from unit to electrical service panel.

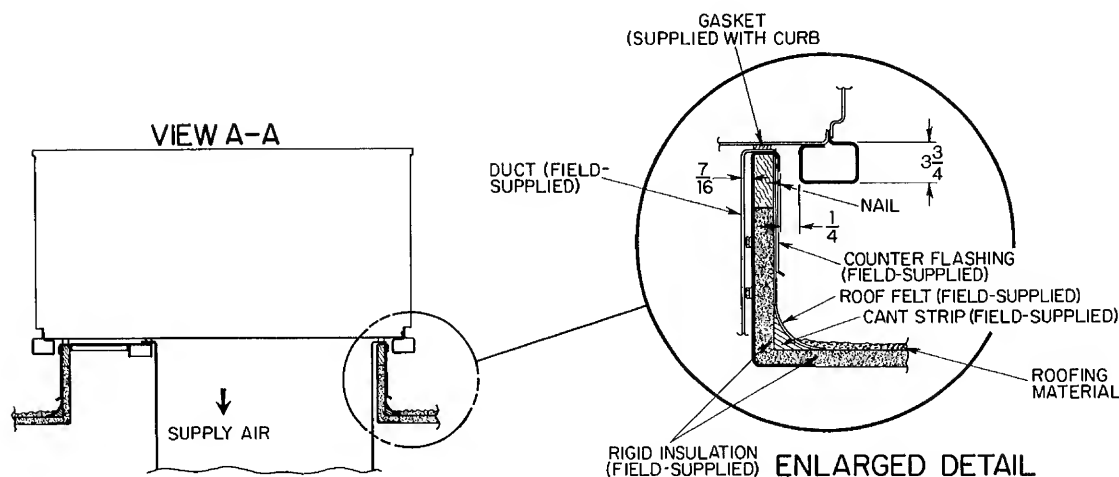
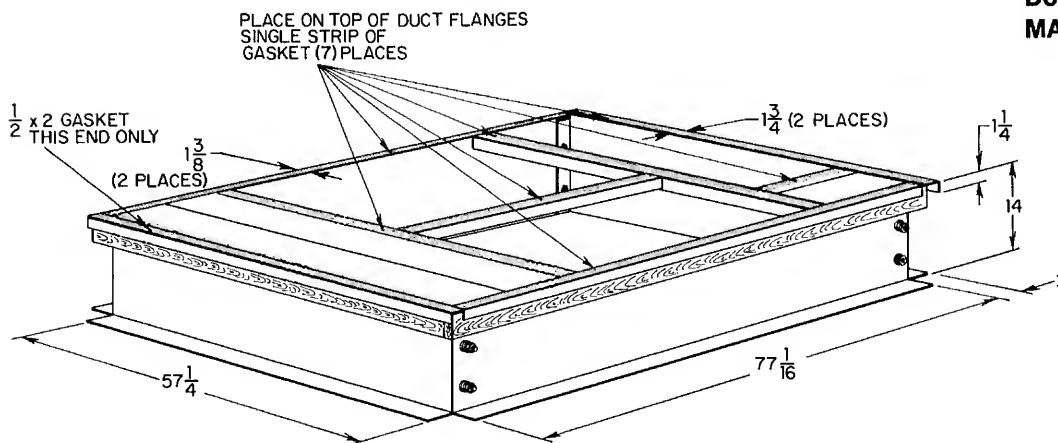
**Model 585E only. Model 579D is equipped with two 20- x 20- x 2-inch and two 16- x 20- x 2-inch filters.

DUCT CONNECTION SIZES TO CURB

Return-Air Duct	39-1/2 x 27-1/8
Supply-Air Duct	43-1/2 x 13-1/4



NOTE:
DUCT CONNECTIONS ARE
MADE TO CURB ONLY.



A83006

MODEL 579D ROOF-MOUNTING CURB P/N 307175-106

DETAILED NET COOLING CAPACITIES

Evaporator Air		CONDENSOR AIR TEMPERATURE (°F)																			
		85					95					105					115				
		Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW	Capacity MBtuh		LDB	LWB	Total Sys KW
		Total	Sens				Total	Sens				Total	Sens				Total	Sens			
Models 585E & 579D																					
2350	71	96.8	50.4	60.2	58.7	10.3	95.4	50.3	60.3	58.9	11.1	91.0	48.8	60.9	59.5	11.7	80.9	45.1	62.3	61.0	12.4
	67	93.2	62.1	55.6	54.0	10.2	89.2	60.9	56.1	54.6	10.8	80.0	57.1	57.6	56.0	11.4	69.5	52.9	59.3	57.6	12.0
	63	87.2	72.7	51.5	49.7	10.0	79.0	69.0	52.9	51.1	10.6	69.0	64.3	54.8	52.7	11.2	58.8	58.7	57.0	54.4	11.8
2500	71	97.4	51.3	61.1	59.5	10.4	96.2	51.4	61.1	59.6	11.2	91.9	50.0	61.6	60.2	11.8	81.8	46.3	62.9	61.5	12.5
	67	93.5	63.4	56.6	54.8	10.3	90.2	62.6	56.9	55.3	10.9	81.2	59.0	58.2	56.6	11.5	70.5	54.8	59.8	58.1	12.1
	63	88.0	74.9	52.4	50.4	10.1	80.4	71.5	53.6	51.6	10.7	70.3	66.7	55.4	53.2	11.3	60.3	60.3	57.8	54.7	11.9
2750	71	97.2	52.1	62.5	60.7	10.5	97.2	53.0	62.2	60.7	11.3	93.1	51.8	62.6	61.2	12.0	83.5	48.5	63.8	62.3	12.6
	67	94.0	65.5	58.0	56.0	10.4	91.2	65.3	58.1	56.3	11.1	83.0	62.1	59.2	57.4	11.7	72.1	57.9	60.6	58.8	12.3
	63	89.2	78.3	53.8	51.5	10.2	82.6	75.5	54.7	52.5	10.8	72.5	70.4	56.4	53.9	11.4	64.0	64.0	58.6	55.0	12.1
3000	71	98.1	53.5	63.6	61.5	10.7	97.0	54.1	63.4	61.6	11.4	94.0	53.6	63.5	62.0	12.2	84.8	50.5	64.5	62.9	12.8
	67	95.1	68.1	59.1	56.9	10.6	92.0	67.8	59.2	57.2	11.2	84.6	65.2	60.0	58.1	11.8	73.5	60.9	61.3	59.3	12.4
	63	90.3	81.5	55.0	52.4	10.4	84.5	79.2	55.7	53.2	11.0	74.4	73.6	57.4	54.5	11.6	67.4	67.4	59.3	55.3	12.2
3250	71	98.9	55.0	64.4	62.2	10.8	97.5	55.6	64.2	62.4	11.6	94.4	55.1	64.4	62.7	12.3	86.2	52.5	65.1	63.5	12.9
	67	95.1	69.8	60.2	57.7	10.6	92.8	70.3	60.1	58.0	11.4	86.0	68.1	60.7	58.7	12.0	74.9	63.7	61.9	59.8	12.6
	63	91.1	84.4	56.1	53.2	10.5	86.2	82.7	56.6	53.8	11.2	76.3	76.3	58.4	54.9	11.8	69.0	69.0	60.4	55.8	12.4
3500	71	98.2	55.4	65.4	63.0	10.9	97.9	56.9	65.0	63.0	11.7	94.4	56.4	65.1	63.3	12.4	87.3	54.5	65.7	63.9	13.1
	67	95.9	72.2	61.0	58.4	10.8	93.4	72.8	60.8	58.6	11.5	87.1	70.9	61.3	59.2	12.1	76.1	66.4	62.5	60.3	12.7
	63	91.8	87.0	57.1	53.9	10.7	88.0	85.9	57.4	54.3	11.3	78.6	78.6	59.3	55.3	12.0	70.8	70.8	61.3	56.1	12.6

NOTES:

- Sensible heat capacities shown are based on 80°F entering air at the indoor coil
- Direct interpolation is permissible. Do not extrapolate.
- To interpolate:
 - below 80°F DB, subtract 805 Btuh per 1000 Ft³/Min for each degree below 80°F from the listed sensible capacity
 - above 80°F DB, add 804 Btuh per 1000 Ft³/Min for each degree above 80°F to the listed sensible capacity

MODEL 585E AIR DELIVERY AT INDICATED E.S.P. (In. wc)—WITH WET COIL AND NO AIR FILTERS

Airflow (Ft ³ /Min)	1.5-HP Motor, 1.3 Service Factor, 1.95 Max BHP, 850–1200-RPM Drive Range																			
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2350	700	0.68	735	0.71	755	0.77	785	0.81	820	0.84	850	0.90	885	0.96	920	1.01	940	1.05	970	1.11
2500	720	0.78	755	0.80	785	0.84	810	0.88	840	0.93	870	0.99	905	1.02	935	1.09	970	1.16	1005	1.23
2750	780	0.90	805	0.94	830	0.98	860	1.03	890	1.08	920	1.12	950	1.19	985	1.26	1020	1.32	1035	1.50
3000	830	1.08	865	1.13	885	1.17	920	1.22	945	1.27	960	1.41	988	1.56	1025	1.67	1050	1.73	1075	1.82
3250	885	1.27	905	1.51	940	1.58	970	1.70	1005	1.81	1030	1.87	1060	1.94	—	—	—	—	—	—
3500	935	1.71	970	1.82	1010	1.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—

E.S.P. = External Static Pressure RPM = Blower fan revolutions per minute BHP = Brake horsepower

- NOTES:
- Shaded portions of table are beyond standard drive range or motor horsepower at rated voltage
 - See "Motor Pulley Settings" table for pulley setting to obtain required blower fan RPM for desired airflow
 - Pressure drop of field-supplied filters must be included in duct system external static pressure.

MODEL 579D AIR DELIVERY AT INDICATED E.S.P. (In. wc)—WITH WET COIL AND STANDARD AIR FILTERS

Airflow (Ft ³ /Min)	1.5-HP Motor, 1.3 Service Factor, 1.95 Max BHP, 850–1200-RPM Drive Range																			
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2350	718	0.53	750	0.73	780	0.80	810	0.84	835	0.89	865	0.93	895	0.98	935	1.03	950	1.08	985	1.15
2500	745	0.73	770	0.83	800	0.87	825	0.92	855	0.97	885	1.00	920	1.05	950	1.11	985	1.18	1020	1.25
2750	795	0.93	820	0.97	845	1.01	880	1.07	910	1.11	940	1.17	970	1.24	1005	1.31	1035	1.38	1040	1.57
3000	850	1.11	885	1.17	910	1.24	935	1.30	960	1.50	990	1.58	1015	1.64	1047	1.74	1075	1.82	1080	1.91
3250	910	1.50	940	1.60	970	1.68	995	1.70	1025	1.85	1060	1.95	—	—	—	—	—	—	—	—
3500	935	1.71	970	1.82	1010	1.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—

E.S.P. = External Static Pressure RPM = Blower fan revolutions per minute. BHP = Brake horsepower

- NOTES:
- Shaded portions of table are beyond standard drive range or motor horsepower at rated voltage
 - See "Motor Pulley Settings" table for pulley setting to obtain required blower fan RPM for desired airflow
 - See "Accessories Pressure Drops" table for economizer and wet coil pressure drops.

ACCESSORIES & OPTIONAL EQUIPMENT

Used With Model	Kit Description	Kit P/N
579D	Roof Mounting Curb	307175-106
579D	Manual Outside-Air Damper*	307178-101
579D	Two-Position Damper Motor†	307180-101
579D	Modulating Economizer‡	307182-101
579D & 585E	LP-Conversion Kit (090203)	307188-102
579D & 585E	LP-Conversion Kit (090146)	307188-101

*Provides up to 35% outside air.

†For use with manual outside-air damper.

‡Includes rain hood and relief-air damper.

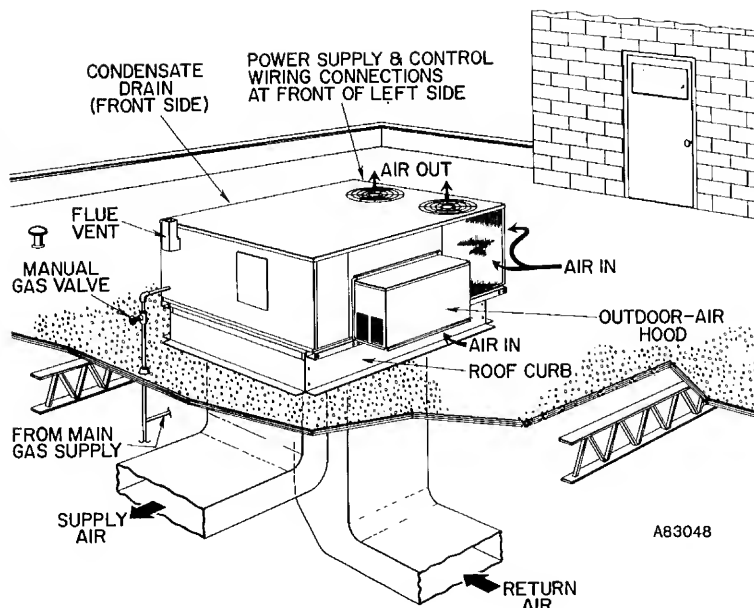
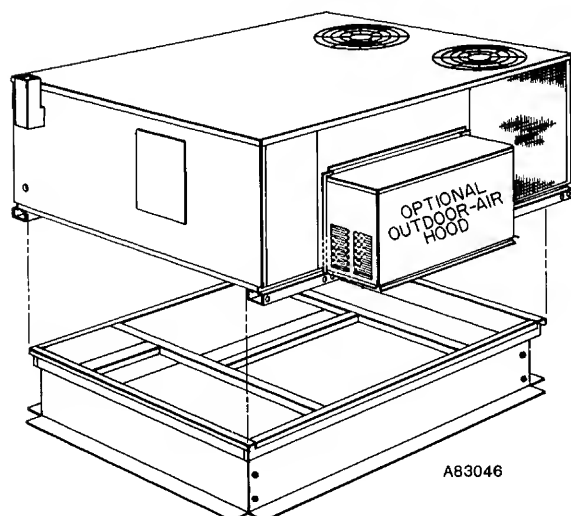
ACCESSORIES PRESSURE DROPS

Airflow (Ft ³ /Min)	Economizer PD (In. wc)	Wet Coil PD (In. wc)
2350	0.012	0.038
2500	0.014	0.042
2750	0.018	0.052
3000	0.020	0.062
3250	0.024	0.072
3500	0.028	0.082

FAN RPM AT MOTOR PULLEY SETTINGS

Motor Pulley Turns Open	Blower Fan RPM
0	1200
1/2	1165
1	1130
1-1/2	1095
2	1060
2-1/2	1025
3	990
3-1/2	955
4	920
4-1/2	885
5	850

MODEL 579D—TYPICAL APPLICATION



ENGINEER'S SPECIFICATION GUIDE

GENERAL: Furnish and install a self-contained electric cooling/gas heating Model 585E Rooftop Unit with horizontal supply- and return-air connections, or install a Model 579D mounted on a full perimeter factory-supplied curb with supply- and return-air ducts connected within the curb. Holes shall be provided in unit baserails for rigging and lifting operations. Units shall be shipped fully charged with oil and R-22 refrigerant. Unit design shall be A.G.A. certified and labeled accordingly.

COOLING CAPACITY: Total net cooling capacity of the unit shall be _____ Btuh or greater, and sensible capacity shall be _____ Btuh or greater at conditions of _____ Ft³/Min evaporator air entering unit at _____ °F dry bulb, _____ °F wet bulb and condenser entering air of _____ °F dry bulb. Total power consumption shall not exceed _____ KWH. The EER at design conditions shall be a minimum of _____ Btuh/watt. The unit shall be capable of cooling operation down to 45°F. Two-stage cooling shall be provided.

HEATING CAPACITY: Total heating capacity of the unit shall be _____ Btuh maximum input. First-stage heating input shall be _____ Btuh.

CABINET: The cabinet shall be constructed of heavy-gauge zinc-coated galvanized steel with Malibu Beige baked enamel finish. Unit shall be capable of firing natural (propane) gas as certified by A.G.A.

COMPRESSORS: Both compressors shall be of the welded, fully hermetic type with crankcase heaters and suitable vibration isolators. A separate refrigerant circuit shall be provided for each compressor.

CONDENSER SECTION: The condenser coil shall be constructed of aluminum plate fins mechanically bonded to seamless copper tubes. The condenser fans shall be direct-driven propeller type and mounted for vertical air discharge.

EVAPORATOR SECTION: The evaporator coil shall be constructed of aluminum plate fins mechanically bonded to seamless copper tubes. The evaporator fan shall be of the forward curved centrifugal type, belt driven. Adjustment of airflow shall be accomplished by means of an adjustable pitch pulley.

GAS HEATING SECTION: The unit shall be equipped with an aluminized steel, 4-pass tubular heat exchanger. Gas controls shall include a two-stage redundant gas valve/regulator, an intermittent pilot ignition system, high-limit switch, and a time-delay heating relay. Combustion air shall be induced by a power venting fan capable of handling 100% of flue gas products. The power venter shall include a centrifugal end switch to prove operation of the power venter fan before allowing ignition.

CONTROL CIRCUIT: The unit control panel shall be prewired in the unit casing—furnished with a 24-V control transformer, low-pressure switches, compressor, condenser, and evaporator fan motor contactors, as well as other protective devices.

ADDITIONAL EQUIPMENT (MODEL 579D): A full roof curb shall be provided. Curb design shall provide for connection of ductwork to the curb before unit placement.

A manual outside-air damper, complete with birdscreen, shall be furnished for field attachment.

An economizer control shall be factory-assembled and installed in the unit. The economizer control shall maintain a fixed supply-air temperature during the "free" cooling operation by providing for full modulation of the operable outside- and return-air dampers. The package shall be complete with necessary dampers, linkage, and spring-return modulating damper motor. The economizer controls shall include an enthalpy control capable of controlling the dampers by measuring the heat content of the outside air.

APPROVALS: The unit shall be A.G.A. certified as an electric cooling/gas heating outdoor unit. All wiring shall be in compliance with N.E.C. The unit shall be certified by ARI for cooling capacity and noise ratings.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

PRINTED IN U.S.A. 7/84